

CHAPTER V

CONCLUSIONS

5.1. Conclusions

This research have an objective to prove earnings management through real activities in listed Indonesian manufacturing companies. From analysis and data which presented in chapter IV, it is concluded that all three hypotheses are rejected and real activities manipulation to manage earnings in Indonesian manufacturing companies are not proved.

5.2. Limitations

The limitation of this research is only use listed Indonesian manufacturing companies' financial reports from 2009 to 2011 which must consecutively available in Indonesia stock exchange website (<http://www.idx.co.id>).

5.3. Suggestions

For another researchers or students who interested to prove real activities manipulation to manage earnings are suggested to:

1. Have different approach to determine suspect firm-years.
2. Develop Roychowdhury's estimation models, thus, it will fits contextually.
3. Have longer period of observation which also means more samples.

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APPENDICES

Appendix 1: List of Companies

Code	Company's Name
ADES	PT Akasha Wira International Tbk.
AKPI	PT Argha Karya Prima Industry Tbk.
APLI	PT Asiaplast Industries Tbk.
ARNA	PT Arwana Citramulia Tbk.
AUTO	PT Astra Otoparts Tbk.
BATA	PT Sepatu Bata Tbk.
BIMA	PT Primarindo Asia Infrastructure Tbk.
BRNA	PT Berlina Tbk.
BTON	PT Betonjaya Manunggal Tbk.
BUDI	PT Budi Acid Jaya Tbk.
CEKA	PT Cahaya Kalbar Tbk.
CTBN	PT Citra Tubindo Tbk.
DPNS	PT Duta Pertiwi Nusantara Tbk.
EKAD	PT Ekadharma International Tbk.
ESTI	PT Ever Shine Tex Tbk.
ETWA	PT Eterindo Wahanatama Tbk.
FASW	PT Fajar Surya Wisesa Tbk.
GDYR	PT Goodyear Indonesia Tbk.
GJTL	PT Gajah Tunggal Tbk.
HMSP	PT Hanjaya Mandala Sampoerna Tbk.
IGAR	PT Champion Pacific Indonesia Tbk.
IKBI	PT Sumi Indo Kabel Tbk.
INAF	PT Indofarma Tbk.
INAI	PT Indal Alumunium Industry Tbk.
INDF	PT Indofood Sukses Makmur Tbk.
INDS	PT Indospring Tbk.
INTP	PT Indocement Tungal Prakarsa Tbk.
JKSW	PT Jakarta Kyoei Steel Works Tbk.
JPRS	PT Jaya Pari Steel Tbk.
KAEF	PT Kimia Farma Tbk.
KARW	PT Karwell Indonesia Tbk.
KBLM	PT Kabelindo Murni Tbk.
KDSI	PT Kedawung Setia Industrial Tbk.
KICI	PT Kedaung Indah Can Tbk.
KLBF	PT Kalbe Farma Tbk.
LION	PT Lion Metal Works Tbk.
LMPI	PT Langgeng Makmur Industri Tbk.
LMSH	PT Lionmesh Prima Tbk.
LPIN	PT Multi Prima Sejahtera Tbk.

MASA	PT Multistrada Arah Sarana Tbk.
MERK	PT Merck Tbk.
MLBI	PT Multi Bintang Indonesia Tbk.
MLIA	PT Mulia Industrindo Tbk.
MRAT	PT Mustika Ratu Tbk.
MYOR	PT Mayora Indah Tbk.
MYRX	PT Hanson International Tbk.
MYTX	PT Apac Citra Centertex Tbk.
PAFI	PT Panasia Filament Inti Tbk.
PBRX	PT Pan Brothers Tbk.
PICO	PT Pelangin Indah Canindo Tbk.
PRAS	PT Prima Alloy Steel Universal Tbk.
PSDN	PT Prasadha Aneka Niaga Tbk.
PTSN	PT Sat Nusapersada Tbk.
PYFA	PT Pyridam Farma Tbk.
RICY	PT Ricky Putra Globalindo Tbk.
RMBA	PT Bentoel Internasional Investama Tbk.
SAIP	PT Surabaya Agung Industri Pulp & Kertas Tbk.
SCPI	PT Schering-Plough Indonesia Tbk.
SIMM	PT Surya Intrindo Makmur Tbk.
SIPD	PT Sierad Produce Tbk.
SKLT	PT Sekar Laut Tbk.
SMCB	PT Holcim Indonesia Tbk.
SMGR	PT Semen Gresik Tbk.
SMSM	PT Selamat Sempurna Tbk.
SPMA	PT Suparma Tbk.
SQBI	PT Taisho Pharmaceutical Indonesia Tbk.
SRSN	PT Indo Acidatama Tbk.
STTP	PT Siantar Top Tbk.
SULI	PT Sumalindo Lestari Jaya Tbk.
TCID	PT Mandom Indonesia Tbk.
TOTO	PT Surya Toto Indonesia Tbk.
TRST	PT Trias Sentosa Tbk.
TSPC	PT Tempo Scan Pacific Tbk.
ULTJ	PT Ultrajaya Milk Industry & Trading Company Tbk.
UNVR	PT Unilever Indonesia Tbk.

Appendix 2: $IBEL_t / A_{t-1}$

Firm's Code	2009	2010	2011
ADES	0.088214	0.177573	0.079718
AKPI	0.063721	0.039322	0.040722
APLI	0.109181	0.081553	0.065452
ARNA	0.088356	0.097381	0.109888
AUTO	0.203439	0.263794	0.197209

BATA	0.131826	0.146336	0.116912
BIMA	0.114805	0.096468	0.027923
BRNA	0.051597	0.074813	0.079498
BTON	0.133146	0.120271	0.213266
BUDI	0.091689	0.029301	0.032
CEKA	0.083703	0.052013	0.113239
CTBN	0.073868	0.092801	0.183843
DPNS	0.042664	0.098442	-0.03781
EKAD	0.113715	0.158749	0.127887
ESTI	0.014497	0.009186	0.007588
ETWA	0.024991	0.071221	0.13679
FASW	0.074419	0.077086	0.029441
GDYR	0.118441	0.062786	0.016889
GJTL	0.103899	0.093569	0.065914
HMSP	0.315444	0.36253	0.392905
IGAR	0.123761	0.167616	0.159212
IKBI	0.045127	0.008186	0.053227
INAF	0.002205	0.017234	0.050301
INAI	-0.0206	0.033853	0.067755
INDF	0.072157	0.097437	0.103471
INDS	0.063999	0.11276	0.504122
INTP	0.243524	0.242891	0.234685
JKSW	0.022381	0.025007	-0.08807
JPRS	0.0048	0.080364	0.091631
KAEF	0.043237	0.088771	0.103641
KARW	-0.04557	-0.09908	0.621524
KBLM	0.003661	0.01095	0.047131
KDSI	0.021638	0.030674	0.042367
KICI	-0.06047	0.038682	0.004154
KLBF	0.184028	0.207298	0.21656
LION	0.132783	0.142358	0.172869
LMPI	0.010699	0.005169	0.008908
LMSH	0.038717	0.100919	0.139348
LPIN	0.055816	0.1024	0.074992
MASA	0.073501	0.069432	0.046978
MERK	0.391133	0.273737	0.531684
MLBI	0.361781	0.445964	0.446214
MLIA	0.385501	0.486243	-0.00841
MRAT	0.059239	0.066785	0.072131
MYOR	0.13086	0.153906	0.109903
MYRX	6.248208	37.3818	0.764946
MYTX	-0.01051	-0.12941	-0.06401
PAFI	-0.02347	-0.19623	-0.16279
PBRX	0.03506	0.043554	0.081282

PICO	0.021505	0.022141	0.022144
PRAS	-0.06522	0.000727	0.002931
PSDN	0.156615	0.072633	0.057543
PTSN	-0.03765	-0.01402	-0.00894
PYFA	0.038244	0.042016	0.051418
RICY	0.005751	0.018145	0.019908
RMBA	0.005648	0.050811	0.062415
SAIP	0.132979	-0.03325	0.114925
SCPI	0.054073	-0.039	-0.10875
SIMM	-0.10857	-0.31443	-0.16379
SIPD	0.023155	0.037263	0.01151
SKLT	0.063696	0.02464	0.029979
SMCB	0.111135	0.114293	0.1019
SMGR	0.316209	0.282529	0.254146
SMSM	0.153753	0.175064	0.205472
SPMA	0.01721	0.020676	0.022198
SQBI	0.445361	0.290477	1.603224
SRSN	0.064591	0.023757	0.0659
STTP	0.065532	0.077692	0.065727
SULI	-0.04606	0.000843	-0.161
TCID	0.136817	0.132156	0.133722
TOTO	0.177301	0.19171	0.199824
TRST	0.066647	0.07115	0.070952
TSPC	0.121644	0.151623	0.16335
ULTJ	0.035067	0.061949	0.050495
UNVR	0.467867	0.452191	0.478586

Appendix 3: Suspect Firm-Years

Firm's Code	2009	2010	2011
ADES	0	0	0
AKPI	0	0	0
APLI	0	0	0
ARNA	0	0	0
AUTO	0	0	0
BATA	0	0	0
BIMA	0	0	0
BRNA	0	0	0
BTON	0	0	0
BUDI	0	0	0
CEKA	0	0	0
CTBN	0	0	0
DPNS	0	0	0

EKAD	0	0	0
ESTI	0	0	0
ETWA	0	0	0
FASW	0	0	0
GDYR	0	0	0
GJTL	0	0	0
HMSP	0	0	0
IGAR	0	0	0
IKBI	0	0	0
INAF	1	0	0
INAI	0	0	0
INDF	0	0	0
INDS	0	0	0
INTP	0	0	0
JKSW	0	0	0
JPRS	1	0	0
KAEF	0	0	0
KARW	0	0	0
KBLM	1	0	0
KDSI	0	0	0
KICI	0	0	1
KLBF	0	0	0
LION	0	0	0
LMPI	0	0	0
LSMH	0	0	0
LPIN	0	0	0
MASA	0	0	0
MERK	0	0	0
MLBI	0	0	0
MLIA	0	0	0
MRAT	0	0	0
MYOR	0	0	0
MYRX	0	0	0
MYTX	0	0	0
PAFI	0	0	0
PBRX	0	0	0
PICO	0	0	0
PRAS	0	1	1
PSDN	0	0	0
PTSN	0	0	0
PYFA	0	0	0
RICY	0	0	0
RMBA	0	0	0
SAIP	0	0	0

SCPI	0	0	0
SIMM	0	0	0
SIPD	0	0	0
SKLT	0	0	0
SMCB	0	0	0
SMGR	0	0	0
SMSM	0	0	0
SPMA	0	0	0
SQBI	0	0	0
SRSN	0	0	0
STTP	0	0	0
SULI	0	1	0
TCID	0	0	0
TOTO	0	0	0
TRST	0	0	0
TSPC	0	0	0
ULTJ	0	0	0
UNVR	0	0	0

Appendix 4: CFO_t / A_{t-1}

Firm's Code	2009	2010	2011
ADES	0.091279	-0.16685	0.176361
AKPI	0.126206	-0.00234	0.10398
APLI	0.143011	0.111551	0.004019
ARNA	0.11953	0.140383	0.16475
AUTO	0.149635	0.085927	0.046291
BATA	0.201259	0.103463	0.145841
BIMA	0.076087	0.044203	0.006176
BRNA	0.062664	0.11904	0.175658
BTON	0.15347	0.306689	0.373858
BUDI	0.14094	0.035122	0.037639
CEKA	0.172874	-0.36367	0.148429
CTBN	0.131808	0.093854	0.121803
DPNS	0.142196	0.106979	0.080383
EKAD	-0.03956	0.08455	0.070759
ESTI	0.048172	0.036322	0.045013
ETWA	-0.00245	-0.28139	-0.14173
FASW	0.233462	0.317314	0.425179
GDYR	0.380887	0.165297	0.127617
GJTL	0.130533	0.113886	0.029341
HMSP	0.266868	0.398498	0.540229
IGAR	0.096127	0.267223	0.077241

IKBI	0.177138	-0.06459	0.119528
INAF	0.042066	0.032571	0.040051
INAI	0.13555	-0.19137	0.051068
INDF	0.05846	0.173086	0.105106
INDS	0.214037	0.011865	-0.10992
INTP	0.282139	0.255346	0.253074
JKSW	0.135717	-0.06217	0.164833
JPRS	-0.0241	0.137946	-0.08946
KAEF	0.083262	0.08903	0.049209
KARW	-0.05762	0.094493	-0.25196
KBLM	0.017806	0.015939	0.117115
KDSI	0.015529	-0.04081	0.081789
KICI	0.011483	0.094011	-0.03939
KLBF	0.239064	0.193431	0.209527
LION	0.199319	0.11986	0.132303
LMPI	0.02305	0.036606	-0.00579
LMSH	0.065577	0.132471	0.065217
LPIN	0.006713	0.009608	0.02874
MASA	0.075968	0.199674	0.032514
MERK	0.216664	0.367727	0.359343
MLBI	0.55979	0.322161	0.590771
MLIA	0.146605	0.160491	0.03973
MRAT	0.006872	0.012619	0.002958
MYOR	0.15273	0.073388	-0.13819
MYRX	-0.43324	15.80799	0.712872
MYTX	-0.06869	0.029668	-0.00236
PAFI	-0.07486	-0.14282	-0.15229
PBRX	0.13715	0.003654	0.046648
PICO	0.045417	-0.04926	-0.02423
PRAS	0.000375	0.22164	0.010057
PSDN	-0.15452	-0.00984	0.05017
PTSN	0.059999	0.071321	0.063998
PYFA	0.050884	0.09544	0.016781
RICY	0.093843	0.055024	0.025742
RMBA	0.099801	0.131036	0.029213
SAIP	0.001469	0.009596	0.019081
SCPI	-0.00582	0.005168	-0.2301
SIMM	-0.345	-0.02657	-0.11681
SIPD	-0.0044	0.004559	0.011026
SKLT	0.058158	0.041231	0.088823
SMCB	0.187948	0.146068	0.199884
SMGR	0.400501	0.260855	0.283734
SMSM	0.288324	0.154086	0.215318
SPMA	0.050694	0.062721	0.07552

SQBI	0.605293	0.442117	1.577371
SRSN	-0.06765	0.018827	0.081631
STTP	0.159478	-0.02464	0.138199
SULI	-0.02614	-0.04167	0.012442
TCID	0.206658	0.158061	0.069842
TOTO	0.220659	0.154377	0.213678
TRST	0.146083	0.070338	0.108283
TSPC	0.160627	0.177159	0.163751
ULTJ	0.009126	0.15149	0.160951
UNVR	0.504357	0.483526	0.627711

Appendix 5: $1 / A_{t-1}$

Firm's Code	2009	2010	2011
ADES	5.40497E-06	5.61E-06	3.08E-06
AKPI	6.08187E-07	6.3E-07	7.7E-07
APLI	3.6221E-06	3.31E-06	2.99E-06
ARNA	1.35853E-06	1.22E-06	1.15E-06
AUTO	2.51173E-07	2.15E-07	1.79E-07
BATA	2.48818E-06	2.4E-06	2.07E-06
BIMA	9.30501E-06	1.05E-05	1.15E-05
BRNA	2.31379E-06	1.97E-06	1.82E-06
BTON	1.41826E-05	1.43E-05	1.11E-05
BUDI	5.88668E-07	6.25E-07	5.08E-07
CEKA	1.6514E-06	1.76E-06	1.18E-06
CTBN	5.49083E-07	5.28E-07	3.83E-07
DPNS	7.0113E-06	7.02E-06	5.69E-06
EKAD	7.10409E-06	6.06E-06	4.89E-06
ESTI	1.88591E-06	1.93E-06	1.71E-06
ETWA	2.39493E-06	1.87E-06	1.87E-06
FASW	2.68922E-07	2.72E-07	2.22E-07
GDYR	9.78159E-07	8.87E-07	8.2E-07
GJTL	1.14764E-07	1.13E-07	9.64E-08
HMSP	6.19816E-08	5.64E-08	4.87E-08
IGAR	3.27029E-06	3.15E-06	2.88E-06
IKBI	1.57132E-06	1.78E-06	1.66E-06
INAF	1.03719E-06	1.37E-06	1.36E-06
INAI	1.60667E-06	2.13E-06	2.57E-06
INDF	2.52581E-08	2.48E-08	2.12E-08
INDS	1.08905E-06	1.61E-06	4.19E-06
INTP	8.85998E-08	7.53E-08	6.52E-08
JKSW	3.3295E-06	3.69E-06	3.45E-05
JPRS	2.50411E-06	2.83E-06	2.43E-06
KAEF	6.91721E-07	6.4E-07	6.03E-07

KARW	6.56022E-06	9.81E-06	1.36E-05
KBLM	2.17812E-06	2.82E-06	2.48E-06
KDSI	2.05879E-06	1.82E-06	1.79E-06
KICI	1.15985E-05	1.19E-05	1.16E-05
KLBF	1.75321E-07	1.54E-07	1.42E-07
LION	3.95035E-06	3.69E-06	3.29E-06
LMPI	1.78547E-06	1.85E-06	1.64E-06
LMSH	1.61322E-05	1.37E-05	1.28E-05
LPIN	5.46627E-06	7.25E-06	6.63E-06
MASA	4.2034E-07	3.94E-07	3.29E-07
MERK	2.66621E-06	2.3E-06	2.3E-06
MLBI	1.06226E-06	1.01E-06	8.79E-07
MLIA	2.67334E-07	3.09E-07	2.21E-07
MRAT	2.81864E-06	2.73E-06	2.59E-06
MYOR	3.42115E-07	3.08E-07	2.27E-07
MYRX	0.000448029	0.00111	7.51E-06
MYTX	4.59547E-07	5.55E-07	5.31E-07
PAFI	1.71868E-06	2.16E-06	2.84E-06
PBRX	1.0496E-06	1.22E-06	1.13E-06
PICO	1.69905E-06	1.84E-06	1.75E-06
PRAS	1.80076E-06	2.38E-06	2.16E-06
PSDN	3.48475E-06	2.83E-06	2.41E-06
PTSN	1.03672E-06	1.11E-06	1.21E-06
PYFA	1.01363E-05	1E-05	9.94E-06
RICY	1.54857E-06	1.67E-06	1.63E-06
RMBA	2.2444E-07	2.32E-07	2.04E-07
SAIP	3.96285E-07	4.14E-07	4.52E-07
SCPI	5.01188E-06	4.85E-06	4.28E-06
SIMM	1.24011E-05	1.67E-05	2.33E-05
SIPD	6.2189E-07	6.09E-07	4.91E-07
SKLT	4.97505E-06	5.1E-06	5.02E-06
SMCB	1.21818E-07	1.38E-07	9.58E-08
SMGR	9.43133E-08	7.72E-08	6.43E-08
SMSM	1.07555E-06	1.06E-06	9.37E-07
SPMA	6.39018E-07	6.98E-07	6.71E-07
SQBI	3.39299E-06	3.14E-06	1.34E-05
SRSN	2.54494E-06	2.42E-06	2.75E-06
STTP	1.59553E-06	1.82E-06	1.54E-06
SULI	4.60841E-07	4.98E-07	5.11E-07
TCID	1.09795E-06	1.01E-06	9.55E-07
TOTO	9.69809E-07	9.89E-07	9.16E-07
TRST	4.63206E-07	5.2E-07	4.93E-07
TSPC	3.37034E-07	3.06E-07	2.79E-07
ULTJ	5.81735E-07	5.77E-07	4.98E-07
UNVR	1.53734E-07	1.34E-07	1.15E-07

Appendix 6: S_t / A_{t-1}

Firm's Code	2009	2010	2011
ADES	0.726633	1.226943	0.922698
AKPI	0.843075	0.692467	1.159998
APLI	1.030628	0.938349	0.920836
ARNA	0.970072	1.009114	1.056727
AUTO	1.322627	1.34665	1.31827
BATA	1.489092	1.546008	1.401318
BIMA	2.253934	3.387949	2.112713
BRNA	1.242832	1.120463	1.233121
BTON	1.887858	1.833056	1.711361
BUDI	1.049084	1.328715	1.272587
CEKA	1.972676	1.263638	1.45586
CTBN	1.243141	1.079684	0.745539
DPNS	0.654063	0.68245	0.689697
EKAD	1.457887	1.539928	1.606397
ESTI	1.018031	1.181246	1.223682
ETWA	1.833153	1.513373	1.695294
FASW	0.735045	0.922298	0.917399
GDYR	1.264582	1.632731	1.623607
GJTL	0.910814	1.110031	1.141717
HMSP	2.415559	2.448666	2.57522
IGAR	1.638832	1.68707	1.475723
IKBI	1.354653	2.18223	2.349952
INAF	1.166896	1.439379	1.639695
INAI	0.756178	0.980879	1.42899
INDF	0.938106	0.950979	0.958886
INDS	0.784368	1.653605	5.170312
INTP	0.937074	0.838926	0.904976
JKSW	0.684726	0.668567	4.902439
JPRS	0.758414	1.208619	1.559457
KAEF	1.974211	2.037488	2.100515
KARW	0.46283	0.384763	0.340851
KBLM	0.656336	1.529445	2.144751
KDSI	1.976097	2.039347	2.116645
KICI	0.962804	0.958625	1.018326
KLBF	1.593201	1.577612	1.551634
LION	0.780226	0.765877	0.883231
LMPI	0.680514	0.742985	0.824718
LSMH	2.01347	2.210762	2.653734
LPIN	0.317525	0.431579	0.417114
MASA	0.710995	0.791327	0.941916
MERK	2.003399	1.833507	2.112695

MLBI	1.716893	1.80194	1.634667
MLIA	0.846028	1.0439	0.856866
MRAT	0.974054	1.010201	1.051673
MYOR	1.634341	2.225218	2.149001
MYRX	0	121.0277	1.377184
MYTX	0.68377	0.955953	1.039354
PAFI	0.424608	0.058683	0.249972
PBRX	1.672648	1.742498	2.446462
PICO	1.031616	1.080452	1.089195
PRAS	0.290284	0.682649	0.715301
PSDN	2.064217	2.625717	3.005928
PTSN	2.080646	2.468038	2.492383
PYFA	1.337996	1.409468	1.502123
RICY	0.786602	0.967657	1.005009
RMBA	1.364983	2.06955	2.054049
SAIP	0.179379	0.151428	0.161468
SCPI	1.427884	1.262095	1.169215
SIMM	0.05232	0	0.099422
SIPD	2.016509	2.219285	1.977528
SKLT	1.374666	1.601266	1.727579
SMCB	0.72407	0.820411	0.720876
SMGR	1.356965	1.107548	1.052419
SMSM	1.478513	1.658562	1.694205
SPMA	0.651623	0.811517	0.798309
SQBI	1.424022	1.003414	4.830756
SRSN	0.8972	0.828635	1.064145
STTP	1.000582	1.389804	1.58282
SULI	0.307519	0.294713	0.209011
TCID	1.524748	1.474874	1.580033
TOTO	0.950729	1.109415	1.22934
TRST	0.727934	0.908335	0.998181
TSPC	1.515957	1.573423	1.610394
ULTJ	0.938878	1.085248	1.047737
UNVR	2.805167	2.63063	2.69722

Appendix 7: $\Delta S_i / A_{t-1}$

Firm's Code	2009	2010	2011
ADES	0.026463	0.472889	0.248575
AKPI	-0.12443	-0.18066	0.312947
APLI	-0.05885	-0.00265	0.073727
ARNA	0.090934	0.14115	0.105939
AUTO	-0.00312	0.212987	0.198457

BATA	0.146066	0.109732	0.071042
BIMA	-0.38891	0.834983	-1.5705
BRNA	0.132367	0.061483	0.201499
BTON	-0.55709	-0.07442	0.286567
BUDI	0.135479	0.214063	0.192924
CEKA	-1.27009	-0.83809	0.61138
CTBN	-0.34696	-0.11623	-0.03677
DPNS	-0.13596	0.028039	0.135949
EKAD	0.160325	0.297102	0.362811
ESTI	-0.05528	0.140865	0.172855
ETWA	0.121212	0.084786	0.175067
FASW	-0.07899	0.17778	0.164127
GDYR	0.047245	0.486238	0.113268
GJTL	-0.0031	0.216001	0.191629
HMSP	0.266009	0.248891	0.461632
IGAR	0.103426	0.110252	-0.06732
IKBI	-1.23068	0.648084	0.308904
INAF	-0.36668	-0.10595	0.211932
INAI	-0.27533	-0.01962	0.242839
INDF	-0.04189	0.031264	0.146563
INDS	-0.26461	0.494077	0.870238
INTP	0.070523	0.042281	0.179204
JKSW	0.051934	-0.0904	-1.34722
JPRS	-1.07635	0.352942	0.519312
KAEF	0.103295	0.211037	0.179411
KARW	-1.35903	-0.30737	-0.19168
KBLM	-0.51919	0.680101	0.798956
KDSI	-0.24333	0.296384	0.103019
KICI	-0.11812	-0.02635	0.078274
KLBF	0.212135	0.175773	0.097415
LION	-0.1268	0.038048	0.199345
LMPI	0.098126	0.03784	0.165199
LMSH	-0.62118	0.497055	0.594757
LPIN	-0.00635	0.010376	0.022784
MASA	0.150428	0.124353	0.281427
MERK	0.304665	0.102048	0.282548
MLBI	0.308696	0.175044	0.060318
MLIA	-0.04866	0.066719	0.110938
MRAT	0.106466	0.065065	0.095638
MYOR	0.297469	0.753732	0.506843
MYRX	0	121.0277	0.558619
MYTX	-0.19305	0.130886	0.123781
PAFI	-0.13882	-0.47425	0.17277
PBRX	-0.17265	-0.20195	0.836955

PICO	0.011859	-0.03843	0.061216
PRAS	-0.44924	0.299488	0.093615
PSDN	-0.4208	0.950629	0.766415
PTSN	-0.16009	0.237302	-0.19723
PYFA	0.125883	0.088636	0.101763
RICY	0.02659	0.12067	0.058816
RMBA	0.031629	0.656069	0.237753
SAIP	-0.07944	-0.03611	-0.00379
SCPI	0.405401	-0.11919	0.055592
SIMM	-0.51447	-0.07027	0.099422
SIPD	0.566458	0.24368	0.189761
SKLT	-0.18315	0.192848	0.151925
SMCB	0.073435	0.0023	0.149788
SMGR	0.205415	-0.00337	0.130733
SMSM	0.022658	0.198731	0.230628
SPMA	-0.01138	0.099734	0.018053
SQBI	0.206148	-0.31252	0.557287
SRSN	0.098296	-0.02338	0.122207
STTP	0.00433	0.246935	0.408258
SULI	-0.19807	-0.03735	-0.09384
TCID	0.163539	0.078637	0.179264
TOTO	-0.13967	0.139652	0.201934
TRST	-0.1109	0.090547	0.138136
TSPC	0.291246	0.195002	0.180082
ULTJ	0.146203	0.153796	0.110622
UNVR	0.410326	0.192835	0.434302

Appendix 8: $PROD_t / A_{t-1}$

Firm's Code	2009	2010	2011
ADES	0.451688	0.783282	0.663811
AKPI	0.643477	0.568088	0.996715
APLI	0.88034	0.82525	0.804484
ARNA	0.679052	0.711264	0.705185
AUTO	1.045331	1.140206	1.140937
BATA	0.776942	0.905865	0.769
BIMA	1.975063	2.949284	1.665402
BRNA	1.024163	0.898187	0.990739
BTON	1.487909	1.611329	1.457942
BUDI	0.851373	1.257146	1.159326
CEKA	1.742387	1.713739	1.149681
CTBN	0.992864	1.09936	0.405937
DPNS	0.401355	0.565545	0.506236

EKAD	1.248693	1.193172	1.292336
ESTI	0.902638	1.146617	1.207431
ETWA	1.717621	1.429244	1.506251
FASW	0.563922	0.777699	0.818256
GDYR	1.104954	1.514579	1.529277
GJTL	0.640105	0.917213	1.035853
HMSP	1.835814	1.749169	1.791565
IGAR	1.412099	1.380121	1.286111
IKBI	1.155209	2.063984	2.225727
INAF	0.78085	1.025712	1.146485
INAI	0.498462	0.93588	1.287995
INDF	0.658608	0.654806	0.711596
INDS	0.439287	1.425374	4.491596
INTP	0.462676	0.423852	0.488842
JKSW	0.672407	0.470494	4.856487
JPRS	0.587569	1.157872	1.365689
KAEF	1.444518	1.426164	1.516067
KARW	0.401885	0.37095	0.335542
KBLM	0.611151	1.402533	2.17182
KDSI	1.748109	1.846375	1.899329
KICI	0.756188	0.938583	0.922424
KLBF	0.79432	0.779004	0.784223
LION	0.336811	0.470516	0.582402
LMPI	0.523815	0.586299	0.687279
LMSH	1.801897	2.032363	2.405396
LPIN	-0.05573	0.272105	0.216872
MASA	0.587584	0.603735	0.895856
MERK	0.861698	0.919707	0.999844
MLBI	0.822405	0.757595	0.689481
MLIA	0.649944	0.841968	0.692665
MRAT	0.409827	0.460972	0.501056
MYOR	1.22055	1.711888	1.962461
MYRX	0	76.07214	0.300032
MYTX	0.639671	0.904335	1.05186
PAFI	0.370291	0.026181	0.281309
PBRX	1.44586	1.644898	2.210628
PICO	0.870496	1.016235	0.946236
PRAS	0.245312	0.573748	0.642054
PSDN	1.887129	2.462254	2.722378
PTSN	2.010536	2.432468	2.411912
PYFA	0.548234	0.483765	0.573533
RICY	0.602716	0.824074	0.821453
RMBA	1.058547	1.63681	1.800212
SAIP	0.169025	0.170186	0.119448

SCPI	0.911931	0.845906	0.891609
SIMM	0.08615	-1.7E-05	0.198564
SIPD	1.887159	2.086971	1.812496
SKLT	1.123033	1.306505	1.352251
SMCB	0.444126	0.527025	0.454427
SMGR	0.696356	0.598451	0.59592
SMSM	1.104535	1.322265	1.278867
SPMA	0.54207	0.681609	0.659644
SQBI	0.469149	0.928647	4.630465
SRSN	0.819895	0.671951	0.708232
STTP	0.734213	1.209247	1.332387
SULI	0.306963	0.30785	0.225703
TCID	0.939151	0.915738	1.087285
TOTO	0.610202	0.806102	0.917324
TRST	0.572042	0.763405	0.906218
TSPC	0.960767	0.99608	1.033961
ULTJ	0.751211	0.728528	0.741769
UNVR	1.237599	1.459628	1.344813

Appendix 9: S_{t-1}/A_{t-1}

Firm's Code	2009	2010	2011
ADES	0.70017	0.754054	0.674122
AKPI	0.967502	0.873128	0.847051
APLI	1.089477	0.940995	0.847109
ARNA	0.879137	0.867964	0.950788
AUTO	1.325746	1.133664	1.119813
BATA	1.343026	1.436276	1.330276
BIMA	2.642846	2.552966	3.683208
BRNA	1.110465	1.05898	1.031622
BTON	2.44495	1.907472	1.424794
BUDI	0.913605	1.114652	1.079663
CEKA	3.242761	2.101727	0.84448
CTBN	1.590099	1.195913	0.782306
DPNS	0.790019	0.654411	0.553747
EKAD	1.297562	1.242827	1.243586
ESTI	1.073311	1.040381	1.050827
ETWA	1.71194	1.428587	1.520228
FASW	0.814031	0.744518	0.753272
GDYR	1.217337	1.146492	1.510338
GJTL	0.913917	0.89403	0.950088
HMSP	2.14955	2.199774	2.113588
IGAR	1.535406	1.576818	1.543044

IKBI	2.585332	1.534146	2.041047
INAF	1.533574	1.545331	1.427763
INAI	1.031512	1.000495	1.186151
INDF	0.979995	0.919716	0.812323
INDS	1.048975	1.159528	4.300074
INTP	0.86655	0.796645	0.725772
JKSW	0.632792	0.758966	6.249664
JPRS	1.834767	0.855678	1.040145
KAEF	1.870917	1.826451	1.921103
KARW	1.821857	0.692131	0.532533
KBLM	1.175526	0.849344	1.345795
KDSI	2.219424	1.742963	2.013627
KICI	1.080923	0.984978	0.940053
KLBF	1.381066	1.401839	1.454219
LION	0.907028	0.727829	0.683886
LMPI	0.582389	0.705145	0.659518
LMSH	2.634655	1.713707	2.058977
LPIN	0.323871	0.421202	0.39433
MASA	0.560568	0.666974	0.66049
MERK	1.698734	1.731459	1.830146
MLBI	1.408197	1.626896	1.574349
MLIA	0.894686	0.977181	0.745928
MRAT	0.867589	0.945137	0.956035
MYOR	1.336872	1.471486	1.642158
MYRX	0	0	0.818565
MYTX	0.876816	0.825066	0.915573
PAFI	0.56343	0.532938	0.077203
PBRX	1.8453	1.944449	1.609507
PICO	1.019757	1.118879	1.027979
PRAS	0.739524	0.383161	0.621687
PSDN	2.485021	1.675088	2.239514
PTSN	2.240732	2.230736	2.689615
PYFA	1.212113	1.320832	1.40036
RICY	0.760012	0.846987	0.946193
RMBA	1.333354	1.413481	1.816296
SAIP	0.258814	0.187534	0.165258
SCPI	1.022483	1.381286	1.113623
SIMM	0.566792	0.070272	0
SIPD	1.450052	1.975605	1.787767
SKLT	1.557813	1.408419	1.575654
SMCB	0.650635	0.818112	0.571088
SMGR	1.15155	1.110919	0.921685
SMSM	1.455855	1.459832	1.463577
SPMA	0.663008	0.711783	0.780257

SQBI	1.217874	1.315931	4.273469
SRSN	0.798904	0.852012	0.941938
STTP	0.996252	1.142869	1.174563
SULI	0.505588	0.332067	0.302851
TCID	1.361208	1.396237	1.400769
TOTO	1.090402	0.969763	1.027406
TRST	0.838829	0.817788	0.860045
TSPC	1.224712	1.378421	1.430312
ULTJ	0.792675	0.931452	0.937115
UNVR	2.394841	2.437795	2.262918

Appendix 10: $\Delta S_{t-1} / A_{t-1}$

Firm's Code	2009	2010	2011
ADES	-0.01085	0.027461	0.259821
AKPI	0.150687	-0.12886	-0.22099
APLI	0.390506	-0.05373	-0.00239
ARNA	0.190392	0.081363	0.132991
AUTO	0.269494	-0.00267	0.17711
BATA	0.114568	0.140885	0.09442
BIMA	0.443495	-0.44051	0.907751
BRNA	0.240618	0.112786	0.056608
BTON	0.811017	-0.56288	-0.05784
BUDI	0.118728	0.143946	0.173939
CEKA	1.900772	-1.35317	-0.56009
CTBN	0.126547	-0.33378	-0.08422
DPNS	0.08368	-0.13603	0.022751
EKAD	0.253886	0.136675	0.239928
ESTI	0.116187	-0.05649	0.125313
ETWA	0.702931	0.094461	0.08517
FASW	0.099828	-0.08	0.145199
GDYR	0.152257	0.042833	0.449789
GJTL	0.149608	-0.00305	0.184878
HMSP	0.303259	0.242246	0.214833
IGAR	0.001011	0.099513	0.100839
IKBI	0.08622	-1.39375	0.606155
INAF	0.213063	-0.48559	-0.1051
INAI	0.205596	-0.36429	-0.02372
INDF	0.276348	-0.04107	0.026706
INDS	0.434268	-0.39117	1.28481
INTP	0.217677	0.059955	0.036578
JKSW	0.195678	0.057564	-0.84503
JPRS	0.750969	-1.21439	0.303744

KAEF	0.234557	0.095564	0.198982
KARW	-0.40895	-2.03233	-0.42542
KBLM	0.479374	-0.67187	0.598437
KDSI	0.320072	-0.21462	0.292646
KICI	0.337876	-0.12084	-0.02584
KLBF	0.15296	0.186655	0.162025
LION	0.197672	-0.11829	0.033975
LMPI	0.041094	0.101677	0.033589
LMSH	0.74337	-0.5287	0.462928
LPIN	0.055182	-0.00842	0.009481
MASA	0.182961	0.141114	0.103793
MERK	0.239682	0.26331	0.101861
MLBI	0.368669	0.292515	0.152935
MLIA	0.152601	-0.0562	0.047675
MRAT	0.156945	0.103305	0.061576
MYOR	0.369222	0.267827	0.556236
MYRX	-129.12	0	0.818565
MYTX	-0.31587	-0.23294	0.125358
PAFI	-0.1044	-0.17424	-0.62392
PBRX	0.141323	-0.20071	-0.18654
PICO	0.448603	0.012863	-0.03656
PRAS	-0.44555	-0.59297	0.272743
PSDN	0.393964	-0.34148	0.810806
PTSN	0.563834	-0.17163	0.258607
PYFA	0.333871	0.124268	0.088063
RICY	0.100967	0.028632	0.117993
RMBA	0.30407	0.032753	0.575785
SAIP	-0.00796	-0.08305	-0.0394
SCPI	0.168705	0.392171	-0.10517
SIMM	-1.07175	-0.691	-0.09833
SIPD	0.434845	0.554967	0.196299
SKLT	0.378477	-0.18764	0.189763
SMCB	0.193221	0.082973	0.001601
SMGR	0.246068	0.168169	-0.00281
SMSM	0.310438	0.022371	0.175367
SPMA	0.141946	-0.01244	0.095892
SQBI	0.334858	0.1905	-1.33098
SRSN	0.11666	0.093345	-0.02657
STTP	0.038406	0.004946	0.208692
SULI	0.010695	-0.21388	-0.03838
TCID	0.243132	0.149756	0.074686
TOTO	0.222169	-0.14247	0.129329
TRST	0.145622	-0.12458	0.085733
TSPC	0.171792	0.264822	0.177265

ULTJ	0.137642	0.145046	0.132804
UNVR	0.466262	0.356588	0.16588

Appendix 11: $DISEXP_t / A_{t-1}$

Firm's Code	2009	2010	2011
ADES	0.236435	0.292663	0.271701
AKPI	0.084657	0.070531	0.085409
APLI	0.046953	0.057527	0.072918
ARNA	0.117705	0.142388	0.156709
AUTO	0.157894	0.124762	0.128543
BATA	0.499443	0.525726	0.470526
BIMA	0.220194	0.300482	0.373578
BRNA	0.132619	0.124773	0.124317
BTON	0.072544	0.072782	0.057697
BUDI	0.063212	0.067566	0.069531
CEKA	0.074501	0.065147	0.0609
CTBN	0.080149	0.10848	0.086566
DPNS	0.123153	0.121893	0.117205
EKAD	0.195753	0.195958	0.196762
ESTI	0.055632	0.063958	0.050157
ETWA	0.050358	0.048138	0.070886
FASW	0.030194	0.036679	0.040091
GDYR	0.06305	0.080541	0.081277
GJTL	0.077649	0.073369	0.063602
HMSP	0.244019	0.222666	0.223049
IGAR	0.088259	0.108383	0.076662
IKBI	0.059715	0.0794	0.094925
INAF	0.268349	0.359895	0.414501
INAI	0.073361	0.098234	0.131944
INDF	0.129264	0.142056	0.124045
INDS	0.074815	0.142028	0.380631
INTP	0.125381	0.114545	0.129494
JKSW	0.031427	0.039223	0.279815
JPRS	0.03782	0.048914	0.042365
KAEF	0.467823	0.485287	0.492377
KARW	0.126107	0.079268	0.082338
KBLM	0.036386	0.054856	0.063795
KDSI	0.177427	0.178218	0.19302
KICI	0.127224	0.130261	0.134486
KLBF	0.516506	0.520711	0.509521
LION	0.180413	0.169185	0.181343
LMPI	0.080953	0.108132	0.107843

LMSH	0.095293	0.090236	0.093964
LPIN	0.073702	0.112479	0.141576
MASA	0.058756	0.070484	0.077524
MERK	0.629703	0.664171	0.652201
MLBI	0.356879	0.414597	0.351322
MLIA	0.127739	0.165921	0.125144
MRAT	0.432861	0.464421	0.481418
MYOR	0.178104	0.287402	0.204704
MYRX	0.43638	15.84684	0.216265
MYTX	0.058534	0.081628	0.064601
PAFI	0.042041	0.026188	0.015884
PBRX	0.118287	0.12166	0.17232
PICO	0.056801	0.050461	0.048571
PRAS	0.040692	0.050117	0.046943
PSDN	0.156266	0.155681	0.167183
PTSN	0.06214	0.070904	0.078605
PYFA	0.784704	0.8417	0.94036
RICY	0.106587	0.146352	0.150379
RMBA	0.192297	0.341524	0.339099
SAIP	0.024018	0.023882	0.040378
SCPI	0.390315	0.436742	0.3983
SIMM	0.030221	0.09469	0.149622
SIPD	0.098322	0.128718	0.143393
SKLT	0.252265	0.287166	0.318029
SMCB	0.103732	0.126079	0.110229
SMGR	0.22933	0.179216	0.170229
SMSM	0.136043	0.149678	0.153841
SPMA	0.035254	0.044486	0.048
SQBI	0.284312	0.3892	1.732647
SRSN	0.115421	0.107435	0.132429
STTP	0.099496	0.147806	0.166095
SULI	0.040749	0.044452	0.02765
TCID	0.355339	0.37204	0.389845
TOTO	0.080484	0.087435	0.089039
TRST	0.047633	0.061518	0.05896
TSPC	0.414561	0.399416	0.429646
ULTJ	0.17158	0.234793	0.221094
UNVR	0.743013	0.756493	0.75288

Appendix 12: Results of regression to estimate normal CFO

2009

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.026	.038		.688	.494
	One_At1	-1066.899	310.441	-.344	-3.437	.001
	St_At1	.083	.028	.302	2.976	.004
	CSt_At1	.098	.044	.222	2.243	.028

a. Dependent Variable: CFO_At1

2010

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.029	.045		.657	.513
	Asset	1028.419	3898.222	.072	.264	.793
	Sales	.034	.034	.260	1.012	.315
	CSales	.087	.052	.664	1.651	.103

a. Dependent Variable: CFO

2011

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.039	.051		-.765	.447
	Asset	-39.589	5747.125	-.001	-.007	.995
	Sales	.095	.031	.371	3.106	.003
	CSales	.094	.087	.135	1.082	.283

a. Dependent Variable: CFO

Appendix 13: Results of regression to estimate normal DISEXP

2009

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.091	.044		2.084	.041
	One_At1	767.936	374.703	.237	2.049	.044
	St1_At1	.059	.031	.223	1.931	.057

a. Dependent Variable: DISEXP

2010

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.026	.048		-.540	.591
	One_At1	14291.726	155.664	1.006	91.811	.000
	St1_At1	.149	.038	.043	3.939	.000

a. Dependent Variable: DISEXP

2011

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.051	.044		1.152	.253
	One_At1	-642.966	5286.176	-.014	-.122	.904
	St1_At1	.125	.030	.485	4.156	.000

a. Dependent Variable: DISEXP

Appendix 14: Results of regression to estimate normal PROD

2009

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.059	.062		-.953	.344
	One_At1	-376.233	7955.344	-.040	-.047	.962
	Sales_At1	.769	.049	.916	15.782	.000
	CSales_At1	-.250	.079	-.184	-3.168	.002
	CSales1_At1	-.002	.028	-.054	-.063	.950

a. Dependent Variable: PROD_At1

2010

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.062	.066		-.944	.348
	One_Asset	-12215.344	6088.828	-.180	-2.006	.049
	Sales_A	.851	.050	1.357	17.031	.000
	CSales_A	-.110	.079	-.177	-1.393	.168
	CSales1_A	-.326	.064	-.016	-5.083	.000

a. Dependent Variable: PROD

2011

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.174	.060		-2.877	.005
	One_At1	9281.467	7233.249	.056	1.283	.204
	S_At1	.906	.037	.942	24.318	.000
	CS_At1	-.004	.104	-.002	-.042	.966
	CS1_At1	-.119	.095	-.046	-1.251	.215

a. Dependent Variable: PROD

Appendix 15: Abnormal CFO

Year	Firm's Code	Actual CFO	Normal CFO	Abnormal CFO
2009	ADES	0.091279085	0.083070594	0.008208491
	AKPI	0.126206188	0.083001662	0.043204526
	APLI	0.143011341	0.101826441	0.0411849
	ARNA	0.119529896	0.113961929	0.005567967
	AUTO	0.149635196	0.135170433	0.014464763
	BATA	0.20125902	0.161306095	0.039952924
	BIMA	0.076087058	0.164887651	-0.088800593
	BRNA	0.062664279	0.13968396	-0.077019681
	BTON	0.15346977	0.112707229	0.040762541
	BUDI	0.140940103	0.125734615	0.015205488
	CEKA	0.172874023	0.062903402	0.10997062
	CTBN	0.131807944	0.094385509	0.037422435
	DPNS	0.142196078	0.059331766	0.082864312
	EKAD	-0.03955557	0.155193221	-0.19474879
	ESTI	0.048171799	0.102983652	-0.054811853
	ETWA	-0.0024548	0.187542028	-0.18999683
	FASW	0.233462093	0.078863906	0.154598188
	GDYR	0.38088717	0.134532601	0.246354569
	GJTL	0.130532771	0.101104446	0.029428325
	HMSP	0.266867752	0.252677231	0.014190521
	IGAR	0.096126992	0.168712502	-0.07258551
	IKBI	0.177137937	0.015525119	0.161612818
	INAF	0.042066374	0.085588362	-0.043521988
	INAI	0.135550004	0.059854857	0.075695146
	INDF	0.058459977	0.099647429	-0.041187452
	INDS	0.214037254	0.063805604	0.150231651
	INTP	0.282139157	0.110565193	0.171573964
	JKSW	0.135717258	0.084311832	0.051405427
	JPRS	-0.02410453	-0.01980604	-0.004298489
	KAEF	0.08326174	0.19931358	-0.11605184
	KARW	-0.05761838	-0.07652983	0.018911454
	KBLM	0.017806151	0.026933907	-0.009127756
	KDSI	0.015529459	0.163874431	-0.148344971
	KICI	0.011482521	0.081844239	-0.070361718
	KLBF	0.239064369	0.178929776	0.060134594
	LION	0.199318959	0.073980523	0.125338436
	LMPI	0.023050361	0.090158523	-0.067108162
	LMSH	0.065577208	0.114750723	-0.049173514
	LPIN	0.006712583	0.045785662	-0.039073078
	MASA	0.075967708	0.09929834	-0.023330632
	MERK	0.216664356	0.219464112	-0.002799756

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MLBI	0.559789842	0.197769645	0.362020197
MLIA	0.146604891	0.091072841	0.055532051
MRAT	0.006871845	0.114264641	-0.107392796
MYOR	0.152730176	0.190573923	-0.037843747
MYRX	-0.43324373	-0.45213834	0.018894608
MYTX	-0.06868616	0.063167333	-0.131853494
PAFI	-0.07485709	0.04563344	-0.120490531
PBRX	0.137150456	0.146701279	-0.009550823
PICO	0.045417398	0.11092389	-0.065506492
PRAS	0.000374558	0.003814526	-0.003439968
PSDN	-0.15452059	0.152194908	-0.306715494
PTSN	0.05999886	0.181848752	-0.121849892
PYFA	0.050884395	0.138605655	-0.08772126
RICY	0.09384335	0.092179764	0.001663586
RMBA	0.099801101	0.142140014	-0.042338912
SAIP	0.001469426	0.032519554	-0.031050128
SCPI	-0.0058238	0.179069317	-0.18489312
SIMM	-0.34499864	-0.03368931	-0.31130933
SIPD	-0.00440049	0.248517229	-0.252917721
SKLT	0.058158336	0.116723637	-0.058565301
SMCB	0.187948327	0.093120378	0.094827949
SMGR	0.40050103	0.15872813	0.241772899
SMSM	0.288323888	0.149780342	0.138543546
SPMA	0.050693909	0.078196175	-0.027502266
SQBI	0.60529307	0.160852077	0.444440992
SRSN	-0.06764698	0.107367018	-0.175013994
STTP	0.159478261	0.107714582	0.051763679
SULI	-0.02614445	0.031412743	-0.057557197
TCID	0.206657956	0.167472454	0.039185502
TOTO	0.220658675	0.090058095	0.13060058
TRST	0.146082712	0.074923122	0.07115959
TSPC	0.16062718	0.180131219	-0.019504039
ULTJ	0.009126252	0.11764229	-0.108516038
UNVR	0.504357133	0.299160813	0.20519632
ADES	-0.16685457	0.118030601	-0.284885167
AKPI	-0.00234374	0.037965075	-0.040308811
APLI	0.111551321	0.064567891	0.04698343
ARNA	0.140382844	0.077302189	0.063080654
AUTO	0.085927286	0.094061491	-0.008134206
BATA	0.103463337	0.094189437	0.0092739
BIMA	0.044202738	0.228507393	-0.184304655
BRNA	0.119039639	0.074990212	0.044049427
BTON	0.306689212	0.100333586	0.206355626
BUDI	0.035122065	0.093962168	-0.058840104

CEKA	-0.36367427	0.00172063	-0.365394901
CTBN	0.093854176	0.056708587	0.037145589
DPNS	0.106979257	0.062274254	0.044705003
EKAD	0.084549606	0.113978532	-0.029428927
ESTI	0.036322147	0.083906119	-0.047583972
ETWA	-0.28138881	0.090360985	-0.371749797
FASW	0.317313928	0.076532629	0.2407813
GDYR	0.165297128	0.12823177	0.037065358
GJTL	0.113885702	0.086111486	0.027774215
HMSP	0.398498356	0.134760228	0.263738128
IGAR	0.267223395	0.099834538	0.167388857
IKBI	-0.06458771	0.161998853	-0.226586564
INAF	0.032571236	0.070790226	-0.03821899
INAI	-0.19136892	0.063339206	-0.254708122
INDF	0.173086253	0.064563521	0.108522731
INDS	0.01186528	0.130369797	-0.118504517
INTP	0.255346419	0.061731701	0.193614718
JKSW	-0.06217385	0.04811595	-0.110289802
JPRS	0.137945648	0.104145559	0.033800088
KAEF	0.089029678	0.117994526	-0.028964849
KARW	0.094493442	0.025885335	0.068608106
KBLM	0.015939411	0.143480301	-0.127540891
KDSI	-0.04081055	0.126663715	-0.16747426
KICI	0.094011415	0.072009706	0.022001709
KLBF	0.193431277	0.098685675	0.094745601
LION	0.119860263	0.062574892	0.05728537
LMPI	0.036605897	0.059885544	-0.023279646
LMSH	0.132471063	0.16217875	-0.029707687
LPIN	0.009607715	0.05239253	-0.042784815
MASA	0.199673902	0.06754152	0.132132382
MERK	0.367727337	0.103273816	0.264453521
MLBI	0.322161324	0.107183559	0.214977765
MLIA	0.160491349	0.07111121	0.089380139
MRAT	0.012619108	0.072308586	-0.059689479
MYOR	0.073388001	0.171113514	-0.097725512
MYRX	15.80799112	15.8047411	0.003250017
MYTX	0.029667883	0.073911851	-0.044243968
PAFI	-0.14281708	-0.00761768	-0.135199406
PBRX	0.003654378	0.072696956	-0.069042578
PICO	-0.04926105	0.064829024	-0.114090071
PRAS	0.221639879	0.081034658	0.140605221
PSDN	-0.00983519	0.204487301	-0.214322495
PTSN	0.071320518	0.135504555	-0.064184037
PYFA	0.095440127	0.095506497	-6.63697E-05

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RICY	0.055024103	0.074572004	-0.019547901
RMBA	0.131035948	0.157239824	-0.026203877
SAIP	0.00959563	0.031736485	-0.022140856
SCPI	0.005168309	0.067143459	-0.061975149
SIMM	-0.02656651	0.040291746	-0.066858254
SIPD	0.004558595	0.127019434	-0.122460838
SKLT	0.041231281	0.106059013	-0.064827732
SMCB	0.146067521	0.057696851	0.08837067
SMGR	0.260855197	0.066979412	0.193875785
SMSM	0.154085749	0.104381667	0.049704082
SPMA	0.062720703	0.066412042	-0.003691338
SQBI	0.442116551	0.039767187	0.402349364
SRSN	0.018826566	0.058097298	-0.039270732
STTP	-0.02463552	0.100134437	-0.124769952
SULI	-0.04167181	0.03662246	-0.078294269
TCID	0.15806137	0.087623869	0.070437502
TOTO	0.154376531	0.080375562	0.074000969
TRST	0.070338145	0.068749783	0.001588362
TSPC	0.177159287	0.100365013	0.076794273
ULTJ	0.151489985	0.080349608	0.071140377
UNVR	0.48352623	0.136215134	0.347311097
ADES	0.176361277	0.072090547	0.104270731
AKPI	0.103979666	0.100760245	0.003219421
APLI	0.00401851	0.055400465	-0.051381955
ARNA	0.164749861	0.071399351	0.09335051
AUTO	0.046291237	0.104973077	-0.05868184
BATA	0.145841421	0.10073527	0.045106151
BIMA	0.006175881	0.012736106	-0.006560225
BRNA	0.175657597	0.097123146	0.078534451
BTON	0.37385832	0.15012977	0.22372855
BUDI	0.037639133	0.100106403	-0.06246727
CEKA	0.148428516	0.156985425	-0.008556909
CTBN	0.121802877	0.028446383	0.093356494
DPNS	0.080383418	0.039258091	0.041125327
EKAD	0.070758546	0.147628534	-0.076869987
ESTI	0.045013056	0.093526324	-0.048513268
ETWA	-0.14172822	0.138440152	-0.280168376
FASW	0.425178564	0.063723787	0.361454778
GDYR	0.127616777	0.125847653	0.001769124
GJTL	0.029340986	0.087593286	-0.0582523
HMSP	0.540229162	0.24900478	0.291224382
IGAR	0.077240534	0.094686461	-0.017445928
IKBI	0.119528311	0.213156563	-0.093628252
INAF	0.040051338	0.136671867	-0.096620529

INAI	0.05106849	0.119567854	-0.068499364
INDF	0.105106095	0.066005706	0.039100388
INDS	-0.10991748	0.533468534	-0.643386017
INTP	0.253074029	0.0639765	0.189097529
JKSW	0.164832511	0.297395701	-0.13256319
JPRS	-0.08946438	0.158059865	-0.247524245
KAEF	0.049208588	0.177317849	-0.12810926
KARW	-0.25195525	-0.02507679	-0.226878456
KBLM	0.117114548	0.239963919	-0.122849372
KDSI	0.081789412	0.171583424	-0.089794012
KICI	-0.03938703	0.064730058	-0.104117086
KLBF	0.209526574	0.117553519	0.091973054
LION	0.132303389	0.063690016	0.068613373
LMPI	-0.00579222	0.054982188	-0.06077441
LMSH	0.065217391	0.268519908	-0.203302517
LPIN	0.028740468	0.002688611	0.026051857
MASA	0.032513695	0.07712488	-0.044611185
MERK	0.359343374	0.188148451	0.171194923
MLBI	0.590770938	0.121891771	0.468879167
MLIA	0.039729506	0.052960424	-0.013230918
MRAT	0.002958442	0.069890049	-0.066931607
MYOR	-0.13819336	0.212861021	-0.351054384
MYRX	0.712872328	0.144291857	0.568580471
MYTX	-0.00236068	0.071462179	-0.073822856
PAFI	-0.15229119	0.001161302	-0.153452495
PBRX	0.046647973	0.272210907	-0.225562934
PICO	-0.02423031	0.070228543	-0.094458854
PRAS	0.010056952	0.037825919	-0.027768967
PSDN	0.050169918	0.318536466	-0.268366548
PTSN	0.06399844	0.178864509	-0.114866069
PYFA	0.016781493	0.112882357	-0.096100864
RICY	0.025741738	0.062025448	-0.03628371
RMBA	0.029212681	0.17843986	-0.14922718
SAIP	0.019081241	-0.0238139	0.042895137
SCPI	-0.23009891	0.077183682	-0.307282588
SIMM	-0.11680805	-0.02085085	-0.095957202
SIPD	0.011025994	0.166640296	-0.155614302
SKLT	0.088822571	0.139190407	-0.050367836
SMCB	0.199883705	0.043742898	0.156140807
SMGR	0.283734067	0.073376028	0.210358039
SMSM	0.215317547	0.143622734	0.071694812
SPMA	0.075519753	0.03861652	0.036903234
SQBI	1.577370937	0.471350407	1.10602053
SRSN	0.081630747	0.073576019	0.008054728

STTP	0.138198973	0.149819158	-0.011620185
SULI	0.012441602	-0.02781574	0.040257344
TCID	0.069841812	0.127945787	-0.058103975
TOTO	0.213677751	0.096841465	0.116836286
TRST	0.10828269	0.068916418	0.039366272
TSPC	0.163751018	0.130928194	0.032822824
ULTJ	0.160950685	0.071015033	0.089935652
UNVR	0.627710785	0.257986639	0.369724146

Appendix 16: Abnormal production costs

Year	Firm's Code	Actual PROD	Normal PROD	ABN_PROD
2009	ADES	0.451687701	0.49105688	-0.039369179
	AKPI	0.643476886	0.619815244	0.023661642
	APLI	0.880340332	0.746198658	0.134141675
	ARNA	0.679052347	0.663437173	0.015615174
	AUTO	1.045330991	0.958431614	0.086899377
	BATA	0.776942025	1.048712106	-0.27177008
	BIMA	1.975062576	1.767507698	0.207554878
	BRNA	1.024162872	0.862507866	0.161655007
	BTON	1.487909345	1.525341056	-0.037431711
	BUDI	0.851373068	0.713528573	0.137844495
	CEKA	1.742387436	1.771304145	-0.028916709
	CTBN	0.992864116	0.983206042	0.009658074
	DPNS	0.401354582	0.474978222	-0.07362364
	EKAD	1.248692848	1.019165392	0.229527455
	ESTI	0.902638011	0.736749747	0.165888264
	ETWA	1.717621165	1.318631409	0.398989756
	FASW	0.563921993	0.525577979	0.038344014
	GDYR	1.104954472	0.901138165	0.203816307
	GJTL	0.640104922	0.641848378	-0.001743457
	HMSP	1.835813579	1.7321716	0.103641978
	IGAR	1.41209943	1.174462855	0.237636575
	IKBI	1.155208608	1.289185373	-0.133976765
	INAF	0.780849936	0.929130478	-0.148280542
	INAI	0.498461613	0.59013979	-0.091678177
	INDF	0.658607903	0.672335207	-0.013727304
	INDS	0.43928741	0.608946617	-0.169659207
	INTP	0.462675517	0.643571933	-0.180896416
	JKSW	0.672406732	0.452878418	0.219528314
	JPRS	0.587568613	0.790430419	-0.202861806
	KAEF	1.444517767	1.433090576	0.011427191
	KARW	0.401885406	0.634049757	-0.232164351

KBLM	0.61115068	0.573473843	0.037676837
KDSI	1.748109001	1.520363461	0.22774554
KICI	0.756187803	0.705895538	0.050292265
KLBF	0.794319503	1.113129216	-0.318809713
LION	0.33681096	0.570713795	-0.233902835
LMPI	0.52381454	0.438964162	0.084850378
LMSH	1.801897141	1.637361141	0.164536
LPIN	-0.05572865	0.184345234	-0.240073889
MASA	0.587583816	0.449631025	0.13795279
MERK	0.86169827	1.40455129	-0.54285302
MLBI	0.822404978	1.183491029	-0.361086051
MLIA	0.649943887	0.603306957	0.04663693
MRAT	0.409827471	0.662135379	-0.252307908
MYOR	1.220549586	1.123048535	0.097501052
MYRX	0	-0.001855935	0.001855935
MYTX	0.639671203	0.515243747	0.124427457
PAFI	0.370291247	0.301476373	0.068814874
PBRX	1.445860474	1.269954517	0.175905958
PICO	0.870496446	0.729937884	0.140558563
PRAS	0.245312171	0.276149474	-0.030837303
PSDN	1.887129092	1.631777429	0.255351664
PTSN	2.010536137	1.579989156	0.430546982
PYFA	0.548233744	0.934236605	-0.386002861
RICY	0.602715882	0.538419323	0.064296559
RMBA	1.058547442	0.982298646	0.076248795
SAIP	0.169025225	0.098313257	0.070711969
SCPI	0.911931277	0.935869034	-0.023937757
SIMM	0.08615045	0.106449478	-0.020299028
SIPD	1.887159344	1.349745116	0.537414228
SKLT	1.12303299	1.041419771	0.081613219
SMCB	0.444125674	0.47899536	-0.034869686
SMGR	0.696355566	0.93291874	-0.236563173
SMSM	1.104535291	1.071553374	0.032981917
SPMA	0.542069727	0.444314635	0.097755092
SQBI	0.469149207	0.982931813	-0.513782606
SRSN	0.819894792	0.605217081	0.214677711
STTP	0.734213004	0.70869707	0.025515933
SULI	0.306963221	0.226445222	0.080517999
TCID	0.939150627	1.072083223	-0.132932595
TOTO	0.610201808	0.706184839	-0.095983032
TRST	0.572041989	0.527915234	0.044126755
TSPC	0.960767184	1.033866958	-0.073099773
ULTJ	0.751210735	0.626031748	0.125178987
UNVR	1.237599036	1.995599662	-0.758000626

2010

ADES	0.783282012	0.852661652	-0.069379641
AKPI	0.568088025	0.581542675	-0.013454649
APLI	0.825250264	0.714028616	0.111221648
ARNA	0.711264079	0.739862348	-0.028598269
AUTO	1.140205501	1.058987035	0.081218466
BATA	0.905865186	1.166571661	-0.260706474
BIMA	2.94928384	2.74526156	0.20402228
BRNA	0.898187396	0.823968412	0.074218984
BTON	1.611329245	1.515322929	0.096006316
BUDI	1.257145877	0.990720693	0.266425185
CEKA	1.713739283	1.526301708	0.187437575
CTBN	1.099360374	0.9722711	0.127089275
DPNS	0.565544963	0.474329307	0.091215656
EKAD	1.193172321	1.097434281	0.09573804
ESTI	1.146616505	0.922767389	0.223849116
ETWA	1.429243593	1.163209752	0.266033841
FASW	0.777698785	0.726101343	0.051597442
GDYR	1.51457925	1.249363756	0.265215494
GJTL	0.91721292	0.858558186	0.058654734
HMSP	1.749168612	1.915328752	-0.166160141
IGAR	1.380121394	1.291009232	0.089112162
IKBI	2.063984454	2.157465824	-0.09348137
INAF	1.025711676	1.316638514	-0.290926838
INAI	0.935880157	0.867929914	0.067950243
INDF	0.654806274	0.757002225	-0.102195951
INDS	1.425374312	1.399123343	0.026250968
INTP	0.423851503	0.626779882	-0.202928379
JKSW	0.470494453	0.452985876	0.017508578
JPRS	1.157872135	1.289715595	-0.13184346
KAEF	1.426163667	1.61016309	-0.183999423
KARW	0.370949545	0.84279411	-0.471844565
KBLM	1.40253283	1.349755177	0.052777653
KDSI	1.846374827	1.689227681	0.157147146
KICI	0.938583481	0.651271027	0.287312454
KLBF	0.779003824	1.198684428	-0.419680604
LION	0.470515835	0.579143928	-0.108628093
LMPI	0.586299337	0.510280474	0.076018863
LMSH	2.032362593	1.770035684	0.262326909
LPIN	0.272104996	0.218127721	0.053977275
MASA	0.603734555	0.546803797	0.056930758
MERK	0.919706616	1.373414249	-0.453707633
MLBI	0.757594883	1.344799716	-0.587204833
MLIA	0.841968053	0.833679271	0.008288782
MRAT	0.460972114	0.723459471	-0.262487357

2011

MYOR	1.711887702	1.65794559	0.053942112
MYRX	76.07214206	76.07641366	-0.004271593
MYTX	0.904335039	0.806411743	0.097923295
PAFI	0.026181478	0.070453512	-0.044272034
PBRX	1.644898208	1.494192711	0.150705497
PICO	1.016234843	0.83511803	0.181116813
PRAS	0.573748437	0.650378934	-0.076630496
PSDN	2.46225412	2.145363533	0.316890587
PTSN	2.43246803	2.0553304	0.37713763
PYFA	0.483764772	0.965151734	-0.481386962
RICY	0.824074275	0.718517035	0.10555724
RMBA	1.636810168	1.613843234	0.022966933
SAIP	0.17018581	0.092597041	0.077588769
SCPI	0.845905836	0.838147444	0.007758392
SIMM	-1.6656E-05	-0.032494816	0.03247816
SIPD	2.086970959	1.611750921	0.475220038
SKLT	1.306505051	1.278755168	0.027749884
SMCB	0.527024516	0.607151358	-0.080126842
SMGR	0.598450828	0.825186305	-0.226735476
SMSM	1.322264831	1.307621465	0.014643366
SPMA	0.681608809	0.613129539	0.06847927
SQBI	0.928646679	0.725983452	0.202663227
SRSN	0.671951317	0.585759898	0.086191418
STTP	1.209246975	1.069865336	0.139381639
SULI	0.30785017	0.256430178	0.051419992
TCID	0.915737669	1.123573656	-0.207835987
TOTO	0.806101938	0.901266916	-0.095164979
TRST	0.763404556	0.735361958	0.028042598
TSPC	0.996080418	1.165618212	-0.169537794
ULTJ	0.728528045	0.790299662	-0.061771618
UNVR	1.459627601	2.038177746	-0.578550144
ADES	0.66381093	0.658360863	0.005450067
AKPI	0.996714688	0.908971001	0.087743687
APLI	0.804484251	0.687853428	0.116630824
ARNA	0.705184881	0.777555973	-0.072371091
AUTO	1.14093696	0.999814691	0.141122269
BATA	0.769000438	1.102974541	-0.333974104
BIMA	1.665402463	1.744624445	-0.079221982
BRNA	0.990738909	0.952247984	0.038490925
BTON	1.457941635	1.485250892	-0.027309257
BUDI	1.15932646	0.961894546	0.197431914
CEKA	1.149680765	1.219893058	-0.070212294
CTBN	0.405937127	0.515169442	-0.109232315
DPNS	0.506235663	0.500338723	0.00589694

EKAD	1.292336284	1.296304641	-0.003968357
ESTI	1.207431423	0.934686939	0.272744484
ETWA	1.506250703	1.36813443	0.138116273
FASW	0.818255617	0.641078062	0.177177555
GDYR	1.52927665	1.250154105	0.279122545
GJTL	1.035853309	0.838233077	0.197620233
HMSP	1.791565293	2.131465856	-0.339900563
IGAR	1.286111439	1.177754946	0.108356493
IKBI	2.225726507	1.896369524	0.329356983
INAF	1.146485221	1.335571934	-0.189086713
INAI	1.287994818	1.146082548	0.141912269
INDF	0.711596244	0.691011631	0.020584613
INDS	4.49159553	4.39091525	0.100680281
INTP	0.488841954	0.641267475	-0.152425521
JKSW	4.856487391	4.693628322	0.162859069
JPRS	1.365689152	1.222655934	0.143033218
KAEF	1.516066571	1.709766892	-0.193700321
KARW	0.335542038	0.312499241	0.023042797
KBLM	2.171820087	1.716845612	0.454974475
KDSI	1.899328522	1.724571947	0.174756575
KICI	0.922424426	0.859225261	0.063199165
KLBF	0.784223157	1.213093696	-0.428870539
LION	0.582402106	0.651730443	-0.069328337
LMPI	0.687279117	0.583627149	0.103651968
LMSH	2.405396419	2.290614895	0.114781525
LPIN	0.21687194	0.26418192	-0.04730998
MASA	0.895855796	0.668703992	0.227151804
MERK	0.999843595	1.747689369	-0.747845774
MLBI	0.689480618	1.29639386	-0.606913242
MLIA	0.692665246	0.598108201	0.094557045
MRAT	0.501056032	0.794943552	-0.29388752
MYOR	1.962461052	1.706105336	0.256355717
MYRX	0.300031528	1.043026385	-0.742994857
MYTX	1.051860023	0.756952828	0.294907195
PAFI	0.281308621	0.152597898	0.128710723
PBRX	2.210628164	2.071119838	0.139508327
PICO	0.946235711	0.833046825	0.113188885
PRAS	0.642053904	0.461130784	0.18092312
PSDN	2.722378326	2.471036552	0.251341774
PTSN	2.411912056	2.064889682	0.347022373
PYFA	0.573533359	1.268011769	-0.69447841
RICY	0.82145297	0.737211804	0.084241166
RMBA	1.800212418	1.6187304	0.181482018
SAIP	0.119448334	-0.018719761	0.138168095

SCPI	0.891609199	0.937176083	-0.045566883
SIMM	0.19856437	0.143775909	0.054788461
SIPD	1.812496258	1.597598536	0.214897721
SKLT	1.352250784	1.41414308	-0.061892297
SMCB	0.454427024	0.479103216	-0.024676192
SMGR	0.595920426	0.779724449	-0.183804022
SMSM	1.278867176	1.347431945	-0.068564769
SPMA	0.659644008	0.54390119	0.115742818
SQBI	4.630464973	4.482104173	0.1483608
SRSN	0.70823203	0.818122356	-0.109890326
STTP	1.332386635	1.247381331	0.085005304
SULI	0.225703337	0.0251668	0.200536536
TCID	1.087284839	1.256428464	-0.169143625
TOTO	0.91732374	0.931794826	-0.014471086
TRST	0.906218004	0.72397111	0.182246894
TSPC	1.033961203	1.265401024	-0.23143982
ULTJ	0.741768647	0.763410592	-0.021641945
UNVR	1.344812511	2.248549669	-0.903737158

Appendix 17: Abnormal discretionary expenditure

Year	Firm's Code	Actual DISEXP	Normal DISEXP	ABN_ DISEXP
2009	ADES	0.236434884	0.136512063	0.099922821
	AKPI	0.084657256	0.148680921	-0.064023665
	APLI	0.046953271	0.158228419	-0.111275147
	ARNA	0.117705396	0.144017228	-0.026311833
	AUTO	0.157894023	0.169650315	-0.011756292
	BATA	0.499442647	0.17239284	0.327049808
	BIMA	0.22019373	0.254705763	-0.034512033
	BRNA	0.132619299	0.158468291	-0.025848992
	BTON	0.072543931	0.24671642	-0.17417249
	BUDI	0.063211773	0.14546994	-0.082258166
	CEKA	0.074501482	0.284402686	-0.209901203
	CTBN	0.08014856	0.185554944	-0.105406384
	DPNS	0.1231534	0.143073543	-0.019920143
	EKAD	0.195753176	0.173241605	0.022511571
	ESTI	0.055632459	0.155936525	-0.100304066
	ETWA	0.050358162	0.194197504	-0.143839343
	FASW	0.030193775	0.139319718	-0.109125943
	GDYR	0.063050153	0.163780034	-0.100729881
	GJTL	0.077648525	0.145124518	-0.067475993
	HMSP	0.244018729	0.218355743	0.025662986
	IGAR	0.088258667	0.184401405	-0.096142737

IKBI	0.059714837	0.245356277	-0.18564144
INAF	0.268349197	0.182577922	0.085771275
INAI	0.073360593	0.153243428	-0.079882835
INDF	0.129264152	0.148974111	-0.019709959
INDS	0.074814752	0.153881478	-0.079066726
INTP	0.125380503	0.142295598	-0.016915095
JKSW	0.031427192	0.130922795	-0.099495603
JPRS	0.037819524	0.201564812	-0.163745288
KAEF	0.467822532	0.20231668	0.265505852
KARW	0.126107036	0.203914141	-0.077807105
KBLM	0.036385536	0.162222185	-0.125836648
KDSI	0.177426594	0.224032635	-0.046606041
KICI	0.127224014	0.163846546	-0.036622532
KLBF	0.516506447	0.172872442	0.343634005
LION	0.180412575	0.147661497	0.032751078
LMPI	0.08095301	0.12674818	-0.04579517
LMSH	0.095292637	0.259462868	-0.164170231
LPIN	0.07370176	0.114244985	-0.040543225
MASA	0.058756448	0.124405898	-0.06564945
MERK	0.629703197	0.193622711	0.436080486
MLBI	0.356879037	0.175162411	0.181716626
MLIA	0.127739433	0.144101255	-0.016361821
MRAT	0.432861399	0.144453679	0.28840772
MYOR	0.178104125	0.170379891	0.007724234
MYRX	0.436379928	0.434899169	0.001480759
MYTX	0.058534312	0.143189225	-0.084654913
PAFI	0.042040623	0.125572647	-0.083532024
PBRX	0.118287007	0.201072483	-0.082785476
PICO	0.056801056	0.15261731	-0.095816254
PRAS	0.04069178	0.136077879	-0.095386099
PSDN	0.156266444	0.24087731	-0.084610866
PTSN	0.062139677	0.224511268	-0.162371592
PYFA	0.784704272	0.170503135	0.614201137
RICY	0.106586533	0.137099147	-0.030512614
RMBA	0.192296677	0.170080909	0.022215769
SAIP	0.024018064	0.106493755	-0.082475691
SCPI	0.390315047	0.155323036	0.234992011
SIMM	0.030221484	0.133975466	-0.103753982
SIPD	0.098322017	0.177306186	-0.078984169
SKLT	0.252264892	0.187039246	0.065225646
SMCB	0.103732191	0.129517561	-0.02578537
SMGR	0.229330025	0.159200206	0.070129819
SMSM	0.136042583	0.177998731	-0.041956147
SPMA	0.035253965	0.130648415	-0.09539445

2010

SQBI	0.284312495	0.165666328	0.118646167
SRSN	0.115420538	0.140170565	-0.024750027
STTP	0.099495812	0.151144019	-0.051648207
SULI	0.040749439	0.121176769	-0.08042733
TCID	0.355338772	0.17240345	0.182935322
TOTO	0.080484439	0.156246481	-0.075762043
TRST	0.047632878	0.14093945	-0.093306572
TSPC	0.414560624	0.163724991	0.250835632
ULTJ	0.171579706	0.138293571	0.033286135
UNVR	0.743012937	0.232971757	0.51004118
ADES	0.292662954	0.166082617	0.126580336
AKPI	0.070530651	0.112620991	-0.04209034
APLI	0.057526763	0.16097011	-0.103443347
ARNA	0.142388469	0.120223682	0.022164787
AUTO	0.124761811	0.145419117	-0.020657306
BATA	0.525726039	0.221618376	0.304107663
BIMA	0.300481656	0.503919737	-0.203438081
BRNA	0.124772784	0.159418332	-0.034645548
BTON	0.072781726	0.462152067	-0.389370341
BUDI	0.067565911	0.148455477	-0.080889566
CEKA	0.065146746	0.311370037	-0.246223291
CTBN	0.10847962	0.159143611	-0.050663991
DPNS	0.121893217	0.171368445	-0.049475228
EKAD	0.19595814	0.245119587	-0.049161447
ESTI	0.063957892	0.156022431	-0.092064539
ETWA	0.048137724	0.212850222	-0.164712497
FASW	0.036678665	0.088396837	-0.051718172
GDYR	0.080540603	0.156923116	-0.076382514
GJTL	0.073368513	0.108335683	-0.034967171
HMSP	0.222666486	0.301603957	-0.078937471
IGAR	0.108382708	0.25317745	-0.144794742
IKBI	0.079400444	0.227298061	-0.147897617
INAF	0.359894785	0.223158538	0.136736247
INAI	0.098234329	0.152930654	-0.054696325
INDF	0.142056179	0.110897308	0.031158871
INDS	0.142027562	0.169195298	-0.027167736
INTP	0.114545124	0.093328057	0.021217067
JKSW	0.039222633	0.139394981	-0.100172348
JPRS	0.04891355	0.141403227	-0.092489676
KAEF	0.485286617	0.254456559	0.230830058
KARW	0.079267754	0.216924812	-0.137657057
KBLM	0.054856376	0.140367336	-0.085510959
KDSI	0.178217912	0.258854188	-0.080636277
KICI	0.130260925	0.289823695	-0.159562769

2011

KLBF	0.520710929	0.184405632	0.336305297
LION	0.169184791	0.13468934	0.034495451
LMPI	0.108132259	0.105093058	0.003039202
LMSH	0.0902363	0.424784926	-0.334548626
LPIN	0.112479153	0.140080684	-0.027601531
MASA	0.070484159	0.078614054	-0.008129895
MERK	0.664171108	0.264124467	0.400046642
MLBI	0.414597394	0.230036627	0.184560767
MLIA	0.165920869	0.123497399	0.04242347
MRAT	0.464420899	0.153409027	0.311011873
MYOR	0.287402302	0.196954628	0.090447674
MYRX	15.84683685	15.83591802	0.010918832
MYTX	0.081628126	0.104400673	-0.022772547
PAFI	0.026187949	0.08388657	-0.057698621
PBRX	0.121659661	0.280286633	-0.158626972
PICO	0.050460694	0.166481328	-0.116020635
PRAS	0.050117182	0.064765936	-0.014648755
PSDN	0.155680546	0.263228223	-0.107547677
PTSN	0.070903705	0.321284363	-0.250380658
PYFA	0.841700271	0.313168312	0.528531959
RICY	0.146351875	0.123564486	0.022787389
RMBA	0.341523927	0.187252845	0.154271082
SAIP	0.023882391	0.007641047	0.016241345
SCPI	0.436741541	0.248437089	0.188304451
SIMM	0.09469003	0.222336152	-0.127646123
SIPD	0.128718481	0.276186822	-0.147468341
SKLT	0.287166261	0.256026678	0.031139583
SMCB	0.126079127	0.097409229	0.028669898
SMGR	0.179216184	0.140065229	0.039150955
SMSM	0.149677534	0.205997636	-0.056320101
SPMA	0.044486496	0.089614345	-0.045127849
SQBI	0.389199646	0.214243365	0.174956282
SRSN	0.107434681	0.135020385	-0.027585704
STTP	0.147805803	0.169756027	-0.021950224
SULI	0.044452053	0.030313696	0.014138357
TCID	0.372039573	0.195737304	0.176302269
TOTO	0.087434662	0.132119693	-0.044685031
TRST	0.061518167	0.102831229	-0.041313063
TSPC	0.399415526	0.18310019	0.216315335
ULTJ	0.234793404	0.120535946	0.114257457
UNVR	0.756492661	0.338083434	0.418409227
ADES	0.271700776	0.132738105	0.138962672
AKPI	0.085408869	0.155815182	-0.070406313
APLI	0.072918346	0.154398147	-0.081479801

ARNA	0.156708897	0.168526215	-0.011817318
AUTO	0.128543148	0.190251131	-0.061707983
BATA	0.470525677	0.215315907	0.255209769
BIMA	0.373577771	0.50305184	-0.129474069
BRNA	0.124316808	0.17818811	-0.053871302
BTON	0.057696592	0.221283076	-0.163586484
BUDI	0.069531259	0.185026581	-0.115495322
CEKA	0.060900443	0.155233552	-0.094333108
CTBN	0.086566449	0.147980698	-0.061414249
DPNS	0.117205421	0.116030321	0.0011751
EKAD	0.196762361	0.202675363	-0.005913002
ESTI	0.050156622	0.180650626	-0.130494004
ETWA	0.070885673	0.239154562	-0.168268889
FASW	0.040091239	0.144458702	-0.104367464
GDYR	0.081276676	0.238597841	-0.157321164
GJTL	0.063602154	0.169113276	-0.105511122
HMSP	0.223049382	0.31441273	-0.091363348
IGAR	0.076662072	0.241358307	-0.164696236
IKBI	0.094925269	0.304316805	-0.209391536
INAF	0.414500557	0.227939311	0.186561246
INAI	0.131943641	0.196996031	-0.06505239
INDF	0.124045088	0.151961026	-0.027915938
INDS	0.380631413	0.584745952	-0.204114539
INTP	0.12949375	0.141126381	-0.011632631
JKSW	0.27981509	0.808672572	-0.528857482
JPRS	0.042365196	0.178856017	-0.136490821
KAEF	0.492376721	0.290023381	0.20235334
KARW	0.082337606	0.108311168	-0.025973562
KBLM	0.063795434	0.216986615	-0.153191181
KDSI	0.193019857	0.300810536	-0.107790678
KICI	0.134486049	0.160440873	-0.025954824
KLBF	0.509520587	0.232027054	0.277493533
LION	0.181342547	0.133822889	0.047519658
LMPI	0.107843395	0.131840269	-0.023996874
LMSH	0.093964194	0.2994035	-0.205439306
LPIN	0.141575624	0.095526253	0.046049371
MASA	0.07752372	0.132805836	-0.055282116
MERK	0.652200714	0.277576032	0.374624682
MLBI	0.351322068	0.246551902	0.104770166
MLIA	0.125144215	0.14354293	-0.018398715
MRAT	0.481418499	0.168253542	0.313164958
MYOR	0.204704456	0.255437434	-0.050732978
MYRX	0.216265313	0.147927483	0.06833783
MYTX	0.064600777	0.164524361	-0.099923584

PAFI	0.015883827	0.058366461	-0.042482634
PBRX	0.172320249	0.250782378	-0.078462129
PICO	0.048571078	0.177772997	-0.129201919
PRAS	0.046942544	0.126780903	-0.079838359
PSDN	0.167183215	0.328615709	-0.161432494
PTSN	0.078605371	0.385585005	-0.306979634
PYFA	0.940360086	0.219001796	0.72135829
RICY	0.150379164	0.16764061	-0.017261446
RMBA	0.339099461	0.277194506	0.061904955
SAIP	0.040377519	0.070894617	-0.030517098
SCPI	0.398299937	0.186842783	0.211457154
SIMM	0.149622448	0.035567244	0.114055205
SIPD	0.143393385	0.273448127	-0.130054741
SKLT	0.31802884	0.244055363	0.073973478
SMCB	0.110228567	0.121793605	-0.011565038
SMGR	0.170229144	0.165587717	0.004641427
SMSM	0.153840819	0.232684325	-0.078843505
SPMA	0.047999576	0.147539438	-0.099539863
SQBI	1.732646957	0.575530043	1.157116914
SRSN	0.1324295	0.166391255	-0.033961755
STTP	0.166094746	0.196211737	-0.030116991
SULI	0.027649708	0.088035731	-0.060386022
TCID	0.389845479	0.224831106	0.165014373
TOTO	0.089039496	0.178239763	-0.089200267
TRST	0.058960128	0.157616105	-0.098655976
TSPC	0.429645565	0.228954477	0.200691087
ULTJ	0.221094331	0.167235054	0.053859277
UNVR	0.75287964	0.333014685	0.419864955

Appendix 18: SIZE (Logarithm of Total Asset)

Firm's Code	2008	2009	2010	2011
ADES	5.267207	5.25112	5.511205	5.499753
AKPI	6.215963	6.200751	6.113241	6.182913
APLI	5.44104	5.480554	5.52498	5.522903
ARNA	5.866932	5.915234	5.941091	5.919866
AUTO	6.600027	6.66698	6.747089	6.842873
BATA	5.604118	5.619802	5.685071	5.713196
BIMA	5.031283	4.977179	4.94089	4.961544
BRNA	5.635677	5.705202	5.741078	5.808862
BTON	4.848245	4.843756	4.95318	5.074506
BUDI	6.230129	6.203801	6.293944	6.327008
CEKA	5.782146	5.754626	5.929659	5.91559

CTBN	6.260362	6.277183	6.417103	6.371196
DPNS	5.154202	5.15397	5.24473	5.236343
EKAD	5.148492	5.217805	5.31063	5.375832
ESTI	5.724479	5.715048	5.765857	5.804092
ETWA	5.620707	5.728999	5.727037	5.792888
FASW	6.570373	6.564812	6.652732	6.693383
GDYR	6.009591	6.052167	6.086007	6.096482
GJTL	6.940196	6.948273	7.015844	7.062738
HMSP	7.207737	7.248377	7.312286	7.287272
IGAR	5.485413	5.502166	5.540921	5.550937
IKBI	5.803736	5.749697	5.778744	5.803047
INAF	5.984141	5.862152	5.865671	6.047237
INAI	5.794073	5.672482	5.589957	5.735824
INDF	7.5976	7.606198	7.67464	7.729051
INDS	5.962951	5.793189	5.378145	5.538836
INTP	7.052567	7.123076	7.185999	7.258908
JKSW	5.47762	5.432915	4.462203	5.458082
JPRS	5.601347	5.548943	5.614139	5.641324
KAEF	6.160069	6.193855	6.219399	6.253881
KARW	5.183082	5.008315	4.867161	4.119685
KBLM	5.661918	5.54996	5.605515	5.808181
KDSI	5.686388	5.740908	5.74642	5.769057
KICI	4.935598	4.925709	4.934205	4.941606
KLBF	6.756167	6.811739	6.84711	6.917745
LION	5.403364	5.433555	5.482731	5.563263
LMPI	5.748249	5.732807	5.78456	5.836258
LMSH	4.792308	4.862316	4.893207	4.99131
LPIN	5.262309	5.139596	5.178796	5.196925
MASA	6.376399	6.404157	6.482647	6.675444
MERK	5.574105	5.637461	5.638258	5.766701
MLBI	5.973769	5.997153	6.055792	6.086649
MLIA	6.572947	6.510356	6.656319	6.786694
MRAT	5.54996	5.563049	5.586983	5.62582
MYOR	6.465829	6.511415	6.643373	6.819534
MYRX	3.348694	2.954725	5.124556	5.935494
MYTX	6.33767	6.256092	6.274835	6.266795
PAFI	5.764805	5.666117	5.547	5.471365
PBRX	5.978975	5.913583	5.948063	6.180424
PICO	5.769793	5.734528	5.756149	5.749613
PRAS	5.744544	5.623987	5.664613	5.682968
PSDN	5.457829	5.548547	5.617641	5.624659
PTSN	5.984341	5.95409	5.916752	5.87905
PYFA	4.994119	4.999726	5.002542	5.072007
RICY	5.810069	5.777948	5.787689	5.807599

RMBA	6.6489	6.633737	6.690426	6.801675
SAIP	6.401992	6.382684	6.344726	6.315426
SCPI	5.299999	5.314409	5.368763	5.494876
SIMM	4.90654	4.778426	4.632538	4.630723
SIPD	6.206287	6.215187	6.309089	6.421868
SKLT	5.303203	5.292668	5.299671	5.330897
SMCB	6.914289	6.861257	7.018586	7.039434
SMGR	7.025427	7.112314	7.192093	7.293619
SMSM	5.968368	5.97389	6.028206	6.055706
SPMA	6.194487	6.156136	6.173196	6.190829
SQBI	5.469417	5.503701	4.874401	4.894083
SRSN	5.594323	5.616766	5.561107	5.557726
STTP	5.797094	5.739351	5.812428	5.970703
SULI	6.336449	6.303096	6.291266	6.229175
TCID	5.959418	5.997657	6.020045	6.053411
TOTO	6.013314	6.004705	6.038057	6.126965
TRST	6.334226	6.283677	6.307401	6.328879
TSPC	6.472326	6.513631	6.555046	6.628427
ULTJ	6.235275	6.238724	6.30246	6.338294
UNVR	6.81323	6.874191	6.939582	7.020457

Appendix 19: Gross Profit Margin

Firm's Code	2009	2010	2011
ADES	0.359839	0.367999	0.382367
AKPI	0.237003	0.189473	0.140243
APLI	0.167611	0.135343	0.132168
ARNA	0.2979	0.318349	0.309753
AUTO	0.180147	0.18427	0.168069
BATA	0.460651	0.472208	0.455326
BIMA	0.165088	0.135635	0.23282
BRNA	0.198372	0.218842	0.218465
BTON	0.165651	0.131162	0.162634
BUDI	0.146598	0.114281	0.126319
CEKA	0.116007	0.116205	0.159362
CTBN	0.157324	0.226111	0.397185
DPNS	0.266093	0.260999	0.247433
EKAD	0.260596	0.27305	0.248283
ESTI	0.058956	0.063675	0.074259
ETWA	0.043306	0.076121	0.11827
FASW	0.196398	0.190933	0.148363
GDYR	0.148957	0.096953	0.067628
GJTL	0.229522	0.196747	0.140965

HMSP	0.288275	0.291736	0.287485
IGAR	0.134906	0.167267	0.182632
IKBI	0.141032	0.051084	0.068771
INAF	0.271014	0.303902	0.329202
INAI	0.178118	0.187291	0.177041
INDF	0.272529	0.325154	0.277574
INDS	0.130309	0.202321	0.220055
INTP	0.483002	0.497473	0.461857
JKSW	0.098111	0.068095	0.035544
JPRS	0.116909	0.130281	0.088631
KAEF	0.276186	0.284098	0.298181
KARW	0.008745	-0.05755	-0.22786
KBLM	0.083466	0.05812	0.081439
KDSI	0.12374	0.116495	0.124295
KICI	0.081917	0.104444	0.1325
KLBF	0.496508	0.505182	0.508728
LION	0.454493	0.447143	0.424821
LMPI	0.165954	0.18433	0.177376
LMSH	0.07795	0.111936	0.111424
LPIN	0.354497	0.418488	0.439912
MASA	0.219099	0.217113	0.18618
MERK	0.58242	0.555459	0.524901
MLBI	0.5255	0.574347	0.581215
MLIA	0.16275	0.207545	0.212654
MRAT	0.564623	0.559992	0.559936
MYOR	0.237334	0.236205	0.175421
MYRX	0	0.476304	0.798739
MYTX	0.042522	0.04082	0.01981
PAFI	-0.16316	-2.35171	0.000761
PBRX	0.098988	0.111604	0.115755
PICO	0.144612	0.137243	0.128462
PRAS	0.102009	0.155338	0.137084
PSDN	0.148517	0.109099	0.101481
PTSN	0.010326	0.027552	0.028161
PYFA	0.638205	0.637344	0.672383
RICY	0.151043	0.18537	0.199371
RMBA	0.184529	0.218348	0.229804
SAIP	0.02412	-0.05243	0.017759
SCPI	0.398793	0.362667	0.253056
SIMM	-1.3233	0	-0.78997
SIPD	0.071174	0.096485	0.104633
SKLT	0.189691	0.197561	0.210408
SMCB	0.378495	0.377372	0.378993
SMGR	0.470824	0.474764	0.457111

SMSM	0.23007	0.236133	0.254811
SPMA	0.117008	0.149163	0.13962
SQBI	0.653065	0.046159	0.055123
SRSN	0.254238	0.197836	0.226165
STTP	0.162753	0.17431	0.173484
SULI	-0.16902	-0.06415	-0.1032
TCID	0.366204	0.370775	0.363411
TOTO	0.302113	0.30965	0.295838
TRST	0.168976	0.169482	0.148858
TSPC	0.372522	0.36896	0.380587
ULTJ	0.261409	0.314955	0.297618
UNVR	0.495756	0.518275	0.511581

Appendix 20: Auxiliary Regression

$$(\text{SUSPECT_NI})_t = \alpha + \beta_1 (\text{NI})_t + \beta_2 (\text{SIZE})_{t-1} + \beta_3 (\text{GPM}) + \varepsilon_t$$

Dependent Variable: SUSPECT				
Method: Least Squares				
Date: 11/13/12 Time: 00:34				
Sample: 1 225				
Included observations: 225				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.126104	0.109044	1.156455	0.2487
NI	-0.002477	0.004931	-0.502321	0.6159
SIZE	-0.015024	0.018582	-0.808547	0.4196
GPM	-0.028625	0.044382	-0.644965	0.5196
R-squared	0.006417	Mean dependent var		0.031111
Adjusted R-squared	-0.007070	S.D. dependent var		0.174005
S.E. of regression	0.174619	Akaike info criterion		-0.634801
Sum squared resid	6.738700	Schwarz criterion		-0.574070
Log likelihood	75.41508	Hannan-Quinn criter.		-0.610290
F-statistic	0.475779	Durbin-Watson stat		2.075115
Prob(F-statistic)	0.699461			

$$(\text{SIZE})_{t-1} = \alpha + \beta_1 (\text{SUSPECT_NI})_t + \beta_2 (\text{NI})_t + \beta_3 (\text{GPM}) + \varepsilon_t$$

Dependent Variable: SIZE	
Method: Least Squares	
Date: 11/13/12 Time: 00:40	
Sample: 1 225	

Included observations: 225				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.822895	0.053706	108.4208	0.0000
SUSPECT	-0.196310	0.242794	-0.808547	0.4196
NI	-0.089830	0.016779	-5.353745	0.0000
GPM	0.467402	0.157471	2.968187	0.0033
R-squared	0.139574	Mean dependent var	5.885316	
Adjusted R-squared	0.127894	S.D. dependent var	0.675901	
S.E. of regression	0.631201	Akaike info criterion	1.935234	
Sum squared resid	88.04974	Schwarz criterion	1.995965	
Log likelihood	-213.7138	Hannan-Quinn criter.	1.959745	
F-statistic	11.94984	Durbin-Watson stat	2.093880	
Prob(F-statistic)	0.000000			

$$(NI)_t = \alpha + \beta_1 (SUSPECT_NI)_t + \beta_2 (SIZE)_{t-1} + \beta_3 (GPM) + \varepsilon_t$$

Dependent Variable: NI Method: Least Squares Date: 11/13/12 Time: 00:43 Sample: 1 225 Included observations: 225				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.572714	1.401539	5.403141	0.0000
SUSPECT	-0.460441	0.916626	-0.502321	0.6159
SIZE	-1.278030	0.238717	-5.353745	0.0000
GPM	1.279675	0.599539	2.134432	0.0339
R-squared	0.121164	Mean dependent var	0.297587	
Adjusted R-squared	0.109234	S.D. dependent var	2.522587	
S.E. of regression	2.380828	Akaike info criterion	4.590392	
Sum squared resid	1252.704	Schwarz criterion	4.651122	
Log likelihood	-512.4191	Hannan-Quinn criter.	4.614903	
F-statistic	10.15632	Durbin-Watson stat	1.946401	
Prob(F-statistic)	0.000003			

$$(GPM) = \alpha + \beta_1 (SUSPECT_NI)_t + \beta_2 (SIZE)_{t-1} + \beta_3 (NI)_t + \varepsilon_t$$

Dependent Variable: GPM Method: Least Squares Date: 11/13/12 Time: 00:44 Sample: 1 225				
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Included observations: 225				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
SUSPECT	-0.065633	0.101762	-0.644965	0.5196
SIZE	0.082021	0.027633	2.968187	0.0033
NI	0.015784	0.007395	2.134432	0.0339
C	-0.281563	0.164530	-1.711319	0.0884
R-squared	0.047891	Mean dependent var		0.203809
Adjusted R-squared	0.034966	S.D. dependent var		0.269161
S.E. of regression	0.264414	Akaike info criterion		0.195013
Sum squared resid	15.45111	Schwarz criterion		0.255744
Log likelihood	-17.93897	Hannan-Quinn criter.		0.219524
F-statistic	3.705418	Durbin-Watson stat		1.916251
Prob(F-statistic)	0.012449			